

Tolerance of Newly Planted Peppermint to Herbicides

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Abstract

A trial was conducted to evaluate crop safety with preemergence applications of flumioxazin and clomazone on spring-planted peppermint. The trial was conducted in a commercial field near Prineville on a sandy loam soil. Treatments were applied April 7, 4 days after planting. Clomazone resulted in no peppermint injury and flumioxazin reduced the foliage fresh weight and the oil yield by 14 percent compared to the check.

Introduction

Flumioxazin (Chateau[®], Valent) and clomazone (Command[®], FCM Agricultural Products) are two herbicides that have recently been registered for use in peppermint. The Command label states that the product can be used on new plantings of mint (often called baby mint) but the Chateau label gives no indication about use on baby mint. A trial was conducted to evaluate crop safety with preemergence applications of flumioxazin and clomazone on spring-planted peppermint.

Methods and Materials

The trial was conducted in a commercial field near Prineville, Oregon on a sandy loam soil. Treatments were applied April 7, 2006, 4 days after planting. Plots were 7-ft by 25-ft with three replications arranged as randomized complete blocks. Treatments were applied with a CO₂ backpack sprayer delivering 20 gal/acre operating at 20 psi and 3 mph. Peppermint injury was determined by making visual evaluations using a 0 to 100 percent standard rating scale, with 0 percent being no injury. The check plots and flumioxazin plots were hand harvested on August 4. The samples were air dried in burlap sacks until August 10 when they were steam distilled in a small-scale still at the Hyslop Research Farm near Corvallis, Oregon to measure the oil yield

Results and Discussion

Clomazone resulted in no visual injury and was therefore not harvested (Table 1). An evaluation 2 months after application showed some mint stunting from flumioxazin. Flumioxazin reduced the foliage fresh weight and the oil yield by 14 percent compared to the check.

At the time of this report the flumioxazin (Chateau) label is being rewritten to exclude its use on baby mint.

Table 1. Newly planted peppermint injury and yield following herbicide applications near Prineville, Oregon, 2006.

Treatment	Rate (lb ai/ac)	Injury May 3	Injury June 3	Injury June 23	Fresh weight lb/plot	Oil yield lb/ac
		----- % -----				
Flumioxazin	0.1275	0	13	0	9.9	54.2
Clomazone	0.5	0	0	0	---	---
Check	0.0	0	0	0	11.5	63.0
LSD (P = 0.05)		---	---	---	1.1	9.2